

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-1		
Lab Sample ID	60221233001		
Filename	U160623B_07		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 10:50
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160623B_01	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/23/2016 13:43

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	71
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	69
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	60
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	73
				1,2,3,4,7,8-HxCDF-13C	2.00	68
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	68
				1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	67
				1,2,3,4,7,8,9-HpCDF-13C	2.00	64
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	71
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.053 ng/Kg		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	53	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 19 of 49

Report No.....10351811_1613B

Page 13 of 43

ED_001521C_00000173-00001

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-2		
Lab Sample ID	60221233002		
Filename	U160620A_07		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 11:00
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 10:08

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	69
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	70
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	62
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	79
				1,2,3,4,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	64
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	67
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	67
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	65
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	73
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	81
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	64
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 20 of 49

Report No.....10351811_1613B

Page 14 of 43

ED_001521C_00000173-00002

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-3		
Lab Sample ID	60221233003		
Filename	U160620A_08		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 11:07
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 10:51

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	74
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	90
				1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	8.6	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	8.6	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	84
				1,2,3,4,7,8-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	73
				1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	78
				1,2,3,4,7,8,9-HpCDF-13C	2.00	79
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	92
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	73
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 8.8 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	8.8	----	4.90			
Total HpCDD	8.8	----	4.90			
OCDF	ND	----	9.70			
OCDD	76.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 21 of 49

Report No.....10351811_1613B

Page 15 of 43

ED_001521C_00000173-00003

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-4		
Lab Sample ID	60221233004		
Filename	U160620A_09		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 11:15
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 11:36

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	90
				1,2,3,7,8-PeCDF-13C	2.00	74
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	74
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	66
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	66
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	69
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	69
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	69
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	75
				1,2,3,4,7,8,9-HpCDF-13C	2.00	75
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	82
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	68
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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REPORT OF LABORATORY ANALYSIS

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Page 22 of 49

Report No.....10351811_1613B

Page 16 of 43

ED_001521C_00000173-00004

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-5		
Lab Sample ID	60221233005		
Filename	U160620A_10		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 11:30
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 12:20

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	74
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	92
				1,2,3,7,8-PeCDF-13C	2.00	76
2,3,7,8-TCDD	15.0	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	66
Total TCDD	15.0	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	84
				1,2,3,4,7,8-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	75
				1,2,3,4,7,8-HxCDD-13C	2.00	83
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	75
				1,2,3,4,7,8,9-HpCDF-13C	2.00	78
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	87
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	69
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 15 ng/m2		
Total HpCDF	5.8	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	9.3	----	4.90			
Total HpCDD	17.0	----	4.90			
OCDF	14.0	----	9.70			
OCDD	110.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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RL = Reporting Limit

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NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 23 of 49

Report No.....10351811_1613B

Page 17 of 43

ED_001521C_00000173-00005

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-6		
Lab Sample ID	60221233006		
Filename	U160620A_11		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 11:40
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 13:05

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	70
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	82
				1,2,3,7,8-PeCDF-13C	2.00	69
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	60
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	77
				1,2,3,4,7,8-HxCDF-13C	2.00	63
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	61
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	63
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	63
				1,2,3,4,7,8-HxCDD-13C	2.00	73
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	64
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	62
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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NA = Not Applicable
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REPORT OF LABORATORY ANALYSIS

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Page 24 of 49

Report No.....10351811_1613B

Page 18 of 43

ED_001521C_00000173-00006

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-7		
Lab Sample ID	60221233007		
Filename	U160620A_12		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 11:50
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 13:49

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	69
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	86
				1,2,3,7,8-PeCDF-13C	2.00	71
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	79
				1,2,3,4,7,8-HxCDF-13C	2.00	65
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	66
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	67
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	70
				1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	67
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	70
				1,2,3,4,7,8,9-HpCDF-13C	2.00	72
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	81
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 25 of 49

Report No.....10351811_1613B

Page 19 of 43

ED_001521C_00000173-00007

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-8		
Lab Sample ID	60221233008		
Filename	U160620A_13		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 11:55
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 14:33

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	69
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	70
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	63
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	78
				1,2,3,4,7,8-HxCDF-13C	2.00	63
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	63
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	64
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	64
				1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	64
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	65
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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Page 26 of 49

Report No.....10351811_1613B

Page 20 of 43

ED_001521C_00000173-00008

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-9		
Lab Sample ID	60221233009		
Filename	U160620A_14		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 16:20
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 15:18

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	25.0	----	0.97	2,3,7,8-TCDD-13C	2.00	89
				1,2,3,7,8-PeCDF-13C	2.00	73
2,3,7,8-TCDD	220.0	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	66
Total TCDD	240.0	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	81
				1,2,3,4,7,8-HxCDF-13C	2.00	70
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	12.0	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	75
				1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	76
				1,2,3,4,7,8,9-HpCDF-13C	2.00	78
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	84
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	67
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	5.9	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	7.8	----	4.90			
1,2,3,4,6,7,8-HpCDF	10.0	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 220 ng/m2		
Total HpCDF	23.0	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	43.0	----	4.90			
Total HpCDD	79.0	----	4.90			
OCDF	18.0	----	9.70			
OCDD	280.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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REPORT OF LABORATORY ANALYSIS

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Page 27 of 49

Report No.....10351811_1613B

Page 21 of 43

ED_001521C_00000173-00009

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-10		
Lab Sample ID	60221233010		
Filename	U160620A_15		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 16:30
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160619B_16	Extracted	06/16/2016 18:15
Method Blank ID	BLANK-50717	Analyzed	06/20/2016 16:02

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	72
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	90
				1,2,3,7,8-PeCDF-13C	2.00	72
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	65
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	82
				1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	71
				1,2,3,4,7,8-HxCDD-13C	2.00	83
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	66
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	72
				1,2,3,4,7,8,9-HpCDF-13C	2.00	76
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	86
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	67
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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REPORT OF LABORATORY ANALYSIS

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Page 28 of 49

Report No.....10351811_1613B

Page 22 of 43

ED_001521C_00000173-00010

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-11		
Lab Sample ID	60221233011		
Filename	U160621A_09		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 16:40
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/21/2016 18:04

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	72
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	89
				1,2,3,7,8-PeCDF-13C	2.00	66
2,3,7,8-TCDD	1.7	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	59
Total TCDD	1.7	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	68
				1,2,3,4,7,8-HxCDF-13C	2.00	68
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	69
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	70
				1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	67
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	63
				1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	71
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 1.7 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 29 of 49

Report No.....10351811_1613B

Page 23 of 43

ED_001521C_00000173-00011

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-12		
Lab Sample ID	60221233012		
Filename	U160621A_10		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/08/2016 16:50
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/21/2016 18:49

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	67
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	84
				1,2,3,7,8-PeCDF-13C	2.00	60
2,3,7,8-TCDD	2.9	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	53
Total TCDD	2.9	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	65
				1,2,3,4,7,8-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	67
				1,2,3,4,7,8-HxCDD-13C	2.00	73
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	66
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	57
				1,2,3,4,7,8,9-HpCDF-13C	2.00	58
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	60
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	49
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	73
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 2.9 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 30 of 49

Report No.....10351811_1613B

Page 24 of 43

ED_001521C_00000173-00012

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-13		
Lab Sample ID	60221233013		
Filename	U160621A_11		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 13:00
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/21/2016 19:33

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	4.0	----	0.97	2,3,7,8-TCDF-13C	2.00	54
Total TCDF	22.0	----	0.97	2,3,7,8-TCDD-13C	2.00	66
				1,2,3,7,8-PeCDF-13C	2.00	47
2,3,7,8-TCDD	21.0	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	41
Total TCDD	25.0	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	52
				1,2,3,4,7,8-HxCDF-13C	2.00	47
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	45
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	43
Total PeCDF	13.0	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	32
				1,2,3,4,7,8-HxCDD-13C	2.00	47
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	40
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	38
				1,2,3,4,7,8,9-HpCDF-13C	2.00	27
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	39
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	20
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	6.5	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	----	7.9	4.90 I			
1,2,3,7,8,9-HxCDD	----	6.2	4.90 I			
Total HxCDD	57.0	----	4.90			
1,2,3,4,6,7,8-HpCDF	14.0	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 24 ng/m2		
Total HpCDF	14.0	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	82.0	----	4.90			
Total HpCDD	190.0	----	4.90			
OCDF	20.0	----	9.70			
OCDD	510.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

RL = Reporting Limit

I = Interference present

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 31 of 49

Report No.....10351811_1613B

Page 25 of 43

ED_001521C_00000173-00013

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-13 - FD		
Lab Sample ID	60221233014		
Filename	U160621A_12		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 13:00
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/21/2016 20:17

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	70
Total TCDF	3.5	----	0.97	2,3,7,8-TCDD-13C	2.00	86
				1,2,3,7,8-PeCDF-13C	2.00	63
2,3,7,8-TCDD	16.0	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	56
Total TCDD	16.0	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	68
				1,2,3,4,7,8-HxCDF-13C	2.00	73
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	66
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	68
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	65
				1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	63
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	55
				1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	62
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	50
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	7.7	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	7.7	----	4.90			
1,2,3,4,6,7,8-HpCDF	15.0	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 17 ng/m2		
Total HpCDF	38.0	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	38.0	----	4.90			
Total HpCDD	72.0	----	4.90			
OCDF	33.0	----	9.70			
OCDD	370.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 32 of 49

Report No.....10351811_1613B

Page 26 of 43

ED_001521C_00000173-00014

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-14		
Lab Sample ID	60221233015		
Filename	U160621A_13		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 13:12
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/21/2016 21:02

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	68
Total TCDF	8.6	----	0.97	2,3,7,8-TCDD-13C	2.00	83
				1,2,3,7,8-PeCDF-13C	2.00	61
2,3,7,8-TCDD	6.6	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	57
Total TCDD	6.6	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	68
				1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	63
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	64
Total PeCDF	13.0	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	64
				1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	59
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	56
				1,2,3,4,7,8,9-HpCDF-13C	2.00	60
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	54
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	28.0	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	74
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	11.0	----	4.90			
1,2,3,4,6,7,8-HpCDF	29.0	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 7.4 ng/m2		
Total HpCDF	63.0	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	27.0	----	4.90			
Total HpCDD	51.0	----	4.90			
OCDF	20.0	----	9.70			
OCDD	150.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 33 of 49

Report No.....10351811_1613B

Page 27 of 43

ED_001521C_00000173-00015

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-15		
Lab Sample ID	60221233016		
Filename	U160621A_14		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 13:24
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/21/2016 21:46

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	2.9	----	0.97	2,3,7,8-TCDF-13C	2.00	76
Total TCDF	28.0	----	0.97	2,3,7,8-TCDD-13C	2.00	92
				1,2,3,7,8-PeCDF-13C	2.00	71
2,3,7,8-TCDD	23.0	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	35
Total TCDD	24.0	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	79
				1,2,3,4,7,8-HxCDF-13C	2.00	36
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	55
2,3,4,7,8-PeCDF	----	6.8	4.90 I	2,3,4,6,7,8-HxCDF-13C	2.00	63
Total PeCDF	20.0	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	42
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	44
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	28
				1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	----	6.3	4.90 I	1,2,3,4,6,7,8-HpCDD-13C	2.00	66
1,2,3,6,7,8-HxCDF	6.4	----	4.90	OCDD-13C	4.00	61
2,3,4,6,7,8-HxCDF	11.0	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	43.0	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	6.8	----	4.90			
1,2,3,7,8,9-HxCDD	6.3	----	4.90			
Total HxCDD	40.0	----	4.90			
1,2,3,4,6,7,8-HpCDF	71.0	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 33 ng/m2		
Total HpCDF	130.0	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	75.0	----	4.90			
Total HpCDD	120.0	----	4.90			
OCDF	55.0	----	9.70			
OCDD	440.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

RL = Reporting Limit

I = Interference present

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NA = Not Applicable

NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 34 of 49

Report No.....10351811_1613B

Page 28 of 43

ED_001521C_00000173-00016

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-16		
Lab Sample ID	60221233017		
Filename	U160621A_15		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 13:55
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/21/2016 22:31

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	76
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	93
				1,2,3,7,8-PeCDF-13C	2.00	73
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	79
				1,2,3,4,7,8-HxCDF-13C	2.00	71
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	68
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	71
				1,2,3,4,7,8-HxCDD-13C	2.00	80
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	65
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	69
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	67
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 35 of 49

Report No.....10351811_1613B

Page 29 of 43

ED_001521C_00000173-00017

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-17		
Lab Sample ID	60221233018		
Filename	U160621A_16		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 14:03
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/21/2016 23:15

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	1.1	----	0.97	2,3,7,8-TCDD-13C	2.00	88
				1,2,3,7,8-PeCDF-13C	2.00	68
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	76
				1,2,3,4,7,8-HxCDF-13C	2.00	68
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	66
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	69
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	71
				1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	63
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	65
				1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	63
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	5.8	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.071 ng/m2		
Total HpCDF	15.0	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	14.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 36 of 49

Report No.....10351811_1613B

Page 30 of 43

ED_001521C_00000173-00018

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-18		
Lab Sample ID	60221233019		
Filename	U160621A_17		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 14:09
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/22/2016 00:00

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	66
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	81
				1,2,3,7,8-PeCDF-13C	2.00	64
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	58
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	71
				1,2,3,4,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	59
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	64
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	67
				1,2,3,4,7,8-HxCDD-13C	2.00	70
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	62
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	65
				1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	76
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	77
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 37 of 49

Report No.....10351811_1613B

Page 31 of 43

ED_001521C_00000173-00019

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-19		
Lab Sample ID	60221233020		
Filename	U160621A_18		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 14:34
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/22/2016 00:44

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	76
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	91
				1,2,3,7,8-PeCDF-13C	2.00	70
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	65
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	78
				1,2,3,4,7,8-HxCDF-13C	2.00	71
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	72
				1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	69
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	67
				1,2,3,4,7,8,9-HpCDF-13C	2.00	72
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	72
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 38 of 49

Report No.....10351811_1613B

Page 32 of 43

ED_001521C_00000173-00020

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-19-FD		
Lab Sample ID	60221233021		
Filename	U160621A_19		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 14:34
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621A_04	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/22/2016 01:29

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	66
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	82
				1,2,3,7,8-PeCDF-13C	2.00	62
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	61
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	72
				1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	66
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	68
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	69
				1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	65
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	73
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	65
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	76
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 39 of 49

Report No.....10351811_1613B

Page 33 of 43

ED_001521C_00000173-00021

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-20		
Lab Sample ID	60221233022		
Filename	U160621B_04		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 14:43
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621B_01	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/22/2016 04:26

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	70
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	64
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	57
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	71
				1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	65
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	67
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	66
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	62
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	57
				1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	53
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	86
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
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NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 40 of 49

Report No.....10351811_1613B

Page 34 of 43

ED_001521C_00000173-00022

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-21		
Lab Sample ID	60221233023		
Filename	U160621B_05		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 15:00
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621B_01	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/22/2016 05:11

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	70
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	65
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	61
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	73
				1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	64
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	67
				1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	64
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	56
				1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	65
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	55
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	23	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	11	----	4.90			
1,2,3,4,6,7,8-HpCDF	37	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 2.8 ng/m2		
Total HpCDF	140	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	98	----	4.90			
Total HpCDD	180	----	4.90			
OCDF	110	----	9.70			
OCDD	1300	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
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NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 41 of 49

Report No.....10351811_1613B

Page 35 of 43

ED_001521C_00000173-00023

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-22		
Lab Sample ID	60221233024		
Filename	U160621B_06		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 15:10
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621B_01	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/22/2016 05:55

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	67
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	87
				1,2,3,7,8-PeCDF-13C	2.00	68
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	79
				1,2,3,4,7,8-HxCDF-13C	2.00	71
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	69
				1,2,3,4,7,8-HxCDD-13C	2.00	80
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	66
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	61
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	58
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	5.2	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	22.0	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 1.4 ng/m2		
Total HpCDF	71.0	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	43.0	----	4.90			
Total HpCDD	88.0	----	4.90			
OCDF	72.0	----	9.70			
OCDD	660.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Page 42 of 49

Report No.....10351811_1613B

Page 36 of 43

ED_001521C_00000173-00024

Method 1613B Sample Analysis Results

Client - PACE Kansas

Client's Sample ID	WS-22-FD		
Lab Sample ID	60221233025		
Filename	U160621B_07		
Injected By	SMT		
Total Amount Extracted	0.0103 m2	Matrix	Wipe
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2016 15:10
ICAL ID	U160204	Received	06/10/2016 10:00
CCal Filename(s)	U160621B_01	Extracted	06/17/2016 19:30
Method Blank ID	BLANK-50729	Analyzed	06/22/2016 06:40

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	68
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	65
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	61
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	74
				1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	63
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	68
				1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	64
				1,2,3,4,7,8,9-HpCDF-13C	2.00	67
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	71
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	6.8	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.72 ng/m2		
Total HpCDF	25.0	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	24.0	----	4.90			
Total HpCDD	49.0	----	4.90			
OCDF	24.0	----	9.70			
OCDD	390.0	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

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Page 43 of 49

Report No.....10351811_1613B

Page 37 of 43

ED_001521C_00000173-00025



Method 1613B Blank Analysis Results

Lab Sample ID BLANK-50717
Filename F160620A_09
Total Amount Extracted 0.0103 m2
ICAL ID F160602
CCal Filename(s) F160619B_17

Matrix
Dilution NA
Extracted 06/16/2016 18:15
Analyzed 06/20/2016 08:55
Injected By SMT

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	80
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	88
				1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	96
				1,2,3,4,7,8-HxCDF-13C	2.00	73
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	79
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	69
				1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	77
				1,2,3,4,7,8,9-HpCDF-13C	2.00	73
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	87
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	62
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	81
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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Method 1613B Blank Analysis Results

Lab Sample ID	BLANK-50729	Matrix	Solid/Wipe
Filename	F160621A_04	Dilution	NA
Total Amount Extracted	0.0103 m2	Extracted	06/17/2016 19:30
ICAL ID	F160602	Analyzed	06/21/2016 12:29
CCal Filename(s)	F160621A_01	Injected By	SMT

Native Isomers	Conc ng/m2	EMPC ng/m2	RL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.97	2,3,7,8-TCDF-13C	2.00	80
Total TCDF	ND	----	0.97	2,3,7,8-TCDD-13C	2.00	96
				1,2,3,7,8-PeCDF-13C	2.00	65
2,3,7,8-TCDD	ND	----	0.97	2,3,4,7,8-PeCDF-13C	2.00	60
Total TCDD	ND	----	0.97	1,2,3,7,8-PeCDD-13C	2.00	70
				1,2,3,4,7,8-HxCDF-13C	2.00	73
1,2,3,7,8-PeCDF	ND	----	4.90	1,2,3,6,7,8-HxCDF-13C	2.00	77
2,3,4,7,8-PeCDF	ND	----	4.90	2,3,4,6,7,8-HxCDF-13C	2.00	76
Total PeCDF	ND	----	4.90	1,2,3,7,8,9-HxCDF-13C	2.00	72
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	----	4.90	1,2,3,6,7,8-HxCDD-13C	2.00	77
Total PeCDD	ND	----	4.90	1,2,3,4,6,7,8-HpCDF-13C	2.00	75
				1,2,3,4,7,8,9-HpCDF-13C	2.00	73
1,2,3,4,7,8-HxCDF	ND	----	4.90	1,2,3,4,6,7,8-HpCDD-13C	2.00	91
1,2,3,6,7,8-HxCDF	ND	----	4.90	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	----	4.90			
1,2,3,7,8,9-HxCDF	ND	----	4.90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	4.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	4.90	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	ND	----	4.90			
1,2,3,7,8,9-HxCDD	ND	----	4.90			
Total HxCDD	ND	----	4.90			
1,2,3,4,6,7,8-HpCDF	ND	----	4.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	4.90	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	4.90	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	4.90			
Total HpCDD	ND	----	4.90			
OCDF	ND	----	9.70			
OCDD	ND	----	9.70			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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Page 45 of 49

Report No.....10351811_1613B

Page 39 of 43

ED_001521C_00000173-00027



Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-50718	Matrix	Solid/Wipe
Filename	F160620A_16	Dilution	NA
Total Amount Extracted	20.0 g	Extracted	06/16/2016 18:15
ICAL ID	F160602	Analyzed	06/20/2016 14:10
CCal Filename	F160619B_17	Injected By	SMT
Method Blank ID	BLANK-50717		

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	108
2,3,7,8-TCDD	10	9.2	6.7	15.8	92
1,2,3,7,8-PeCDF	50	50	40.0	67.0	100
2,3,4,7,8-PeCDF	50	55	34.0	80.0	110
1,2,3,7,8-PeCDD	50	47	35.0	71.0	95
1,2,3,4,7,8-HxCDF	50	58	36.0	67.0	115
1,2,3,6,7,8-HxCDF	50	53	42.0	65.0	105
2,3,4,6,7,8-HxCDF	50	52	35.0	78.0	104
1,2,3,7,8,9-HxCDF	50	52	39.0	65.0	104
1,2,3,4,7,8-HxCDD	50	53	35.0	82.0	106
1,2,3,6,7,8-HxCDD	50	61	38.0	67.0	123
1,2,3,7,8,9-HxCDD	50	58	32.0	81.0	117
1,2,3,4,6,7,8-HpCDF	50	52	41.0	61.0	105
1,2,3,4,7,8,9-HpCDF	50	50	39.0	69.0	100
1,2,3,4,6,7,8-HpCDD	50	49	35.0	70.0	98
OCDF	100	97	63.0	170.0	97
OCDD	100	110	78.0	144.0	112
2,3,7,8-TCDD-37Cl4	10	8.7	3.1	19.1	87
2,3,7,8-TCDF-13C	100	81	22.0	152.0	81
2,3,7,8-TCDD-13C	100	86	20.0	175.0	86
1,2,3,7,8-PeCDF-13C	100	82	21.0	192.0	82
2,3,4,7,8-PeCDF-13C	100	76	13.0	328.0	76
1,2,3,7,8-PeCDD-13C	100	89	21.0	227.0	89
1,2,3,4,7,8-HxCDF-13C	100	72	19.0	202.0	72
1,2,3,6,7,8-HxCDF-13C	100	77	21.0	159.0	77
2,3,4,6,7,8-HxCDF-13C	100	77	22.0	176.0	77
1,2,3,7,8,9-HxCDF-13C	100	68	17.0	205.0	68
1,2,3,4,7,8-HxCDD-13C	100	78	21.0	193.0	78
1,2,3,6,7,8-HxCDD-13C	100	72	25.0	163.0	72
1,2,3,4,6,7,8-HpCDF-13C	100	80	21.0	158.0	80
1,2,3,4,7,8,9-HpCDF-13C	100	75	20.0	186.0	75
1,2,3,4,6,7,8-HpCDD-13C	100	91	26.0	166.0	91
OCDD-13C	200	130	26.0	397.0	66

Cs = Concentration Spiked (ng/mL)

Cr = Concentration Recovered (ng/mL)

Rec. = Recovery (Expressed as Percent)

Control Limit Reference: Method 1613, Table 6, 10/94 Revision

R = Recovery outside of control limits

Nn = Value obtained from additional analysis

* = See Discussion

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Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-50730	Matrix	Solid/Wipe
Filename	F160621A_15	Dilution	NA
Total Amount Extracted	10.0 g	Extracted	06/17/2016 19:30
ICAL ID	F160602	Analyzed	06/21/2016 20:42
CCal Filename	F160621A_01	Injected By	SMT
Method Blank ID	BLANK-50729		

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	9.8	7.5	15.8	98
2,3,7,8-TCDD	10	8.4	6.7	15.8	84
1,2,3,7,8-PeCDF	50	45	40.0	67.0	91
2,3,4,7,8-PeCDF	50	52	34.0	80.0	104
1,2,3,7,8-PeCDD	50	44	35.0	71.0	88
1,2,3,4,7,8-HxCDF	50	52	36.0	67.0	103
1,2,3,6,7,8-HxCDF	50	48	42.0	65.0	96
2,3,4,6,7,8-HxCDF	50	47	35.0	78.0	94
1,2,3,7,8,9-HxCDF	50	48	39.0	65.0	96
1,2,3,4,7,8-HxCDD	50	50	35.0	82.0	100
1,2,3,6,7,8-HxCDD	50	56	38.0	67.0	111
1,2,3,7,8,9-HxCDD	50	52	32.0	81.0	105
1,2,3,4,6,7,8-HpCDF	50	48	41.0	61.0	96
1,2,3,4,7,8,9-HpCDF	50	47	39.0	69.0	95
1,2,3,4,6,7,8-HpCDD	50	45	35.0	70.0	90
OCDF	100	89	63.0	170.0	89
OCDD	100	100	78.0	144.0	103
2,3,7,8-TCDD-37Cl4	10	7.3	3.1	19.1	73
2,3,7,8-TCDF-13C	100	69	22.0	152.0	69
2,3,7,8-TCDD-13C	100	82	20.0	175.0	82
1,2,3,7,8-PeCDF-13C	100	69	21.0	192.0	69
2,3,4,7,8-PeCDF-13C	100	67	13.0	328.0	67
1,2,3,7,8-PeCDD-13C	100	80	21.0	227.0	80
1,2,3,4,7,8-HxCDF-13C	100	68	19.0	202.0	68
1,2,3,6,7,8-HxCDF-13C	100	71	21.0	159.0	71
2,3,4,6,7,8-HxCDF-13C	100	71	22.0	176.0	71
1,2,3,7,8,9-HxCDF-13C	100	67	17.0	205.0	67
1,2,3,4,7,8-HxCDD-13C	100	75	21.0	193.0	75
1,2,3,6,7,8-HxCDD-13C	100	68	25.0	163.0	68
1,2,3,4,6,7,8-HpCDF-13C	100	68	21.0	158.0	68
1,2,3,4,7,8,9-HpCDF-13C	100	66	20.0	186.0	66
1,2,3,4,6,7,8-HpCDD-13C	100	79	26.0	166.0	79
OCDD-13C	200	100	26.0	397.0	51

Cs = Concentration Spiked (ng/mL)
 Cr = Concentration Recovered (ng/mL)
 Rec. = Recovery (Expressed as Percent)
 Control Limit Reference: Method 1613, Table 6, 10/94 Revision
 R = Recovery outside of control limits
 Nn = Value obtained from additional analysis
 * = See Discussion

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Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCSD-50745	Matrix	Solid/Wipe
Filename	F160621A_16	Dilution	NA
Total Amount Extracted	10.0 g	Extracted	06/17/2016 19:30
ICAL ID	F160602	Analyzed	06/21/2016 21:27
CCal Filename	F160621A_01	Injected By	SMT
Method Blank ID	BLANK-50729		

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	10	7.5	15.8	103
2,3,7,8-TCDD	10	8.7	6.7	15.8	87
1,2,3,7,8-PeCDF	50	46	40.0	67.0	93
2,3,4,7,8-PeCDF	50	52	34.0	80.0	104
1,2,3,7,8-PeCDD	50	44	35.0	71.0	88
1,2,3,4,7,8-HxCDF	50	55	36.0	67.0	110
1,2,3,6,7,8-HxCDF	50	50	42.0	65.0	100
2,3,4,6,7,8-HxCDF	50	48	35.0	78.0	96
1,2,3,7,8,9-HxCDF	50	49	39.0	65.0	97
1,2,3,4,7,8-HxCDD	50	51	35.0	82.0	102
1,2,3,6,7,8-HxCDD	50	58	38.0	67.0	116
1,2,3,7,8,9-HxCDD	50	55	32.0	81.0	111
1,2,3,4,6,7,8-HpCDF	50	50	41.0	61.0	100
1,2,3,4,7,8,9-HpCDF	50	47	39.0	69.0	95
1,2,3,4,6,7,8-HpCDD	50	46	35.0	70.0	93
OCDF	100	90	63.0	170.0	90
OCDD	100	110	78.0	144.0	107
2,3,7,8-TCDD-37Cl4	10	7.8	3.1	19.1	78
2,3,7,8-TCDF-13C	100	68	22.0	152.0	68
2,3,7,8-TCDD-13C	100	80	20.0	175.0	80
1,2,3,7,8-PeCDF-13C	100	68	21.0	192.0	68
2,3,4,7,8-PeCDF-13C	100	65	13.0	328.0	65
1,2,3,7,8-PeCDD-13C	100	78	21.0	227.0	78
1,2,3,4,7,8-HxCDF-13C	100	63	19.0	202.0	63
1,2,3,6,7,8-HxCDF-13C	100	68	21.0	159.0	68
2,3,4,6,7,8-HxCDF-13C	100	66	22.0	176.0	66
1,2,3,7,8,9-HxCDF-13C	100	63	17.0	205.0	63
1,2,3,4,7,8-HxCDD-13C	100	69	21.0	193.0	69
1,2,3,6,7,8-HxCDD-13C	100	64	25.0	163.0	64
1,2,3,4,6,7,8-HpCDF-13C	100	64	21.0	158.0	64
1,2,3,4,7,8,9-HpCDF-13C	100	63	20.0	186.0	63
1,2,3,4,6,7,8-HpCDD-13C	100	74	26.0	166.0	74
OCDD-13C	200	100	26.0	397.0	50

Cs = Concentration Spiked (ng/mL)

Cr = Concentration Recovered (ng/mL)

Rec. = Recovery (Expressed as Percent)

Control Limit Reference: Method 1613, Table 6, 10/94 Revision

R = Recovery outside of control limits

Nn = Value obtained from additional analysis

* = See Discussion

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Method 1613B

Spike Recovery Relative Percent Difference (RPD) Results

Client PACE Kansas

Spike 1 ID LCS-50730
Spike 1 Filename F160621A_15

Spike 2 ID LCSD-50745
Spike 2 Filename F160621A_16

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	98	103	5.0
2,3,7,8-TCDD	84	87	3.5
1,2,3,7,8-PeCDF	91	93	2.2
2,3,4,7,8-PeCDF	104	104	0.0
1,2,3,7,8-PeCDD	88	88	0.0
1,2,3,4,7,8-HxCDF	103	110	6.6
1,2,3,6,7,8-HxCDF	96	100	4.1
2,3,4,6,7,8-HxCDF	94	96	2.1
1,2,3,7,8,9-HxCDF	96	97	1.0
1,2,3,4,7,8-HxCDD	100	102	2.0
1,2,3,6,7,8-HxCDD	111	116	4.4
1,2,3,7,8,9-HxCDD	105	111	5.6
1,2,3,4,6,7,8-HpCDF	96	100	4.1
1,2,3,4,7,8,9-HpCDF	95	95	0.0
1,2,3,4,6,7,8-HpCDD	90	93	3.3
OCDF	89	90	1.1
OCDD	103	107	3.8

%REC = Percent Recovered

RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

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Page 49 of 49

Report No.....10351811_1613B

Page 43 of 43

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